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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,319	03/31/2006	Yuanhao Sun	42P21030	5553
45209	7590	09/29/2011		
MISSION/BSTZ			EXAMINER	
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1279 OAKMEAD PARKWAY				
SUNNYVALE, CA 94085-4040			ART UNIT	
			PAPER NUMBER	
			2444	
			MAIL DATE	
			DELIVERY MODE	
			09/29/2011	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,319

Applicant(s)

SUN ET AL.

Examiner

GREG C. BENZON

Art Unit

2444

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1,2,4,5 and 19-29 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1,2,4,5 and 19-29 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 05/06/2011
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

This application has been examined. Claims 1-2,4-5,19-29 are pending. Claims 3,6-18 are cancelled. Claims 27-29 are submitted as new claims.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/06/2011 has been entered.

Response to Arguments

Applicant's arguments filed 05/06/2011 have been fully considered but they are not persuasive.

Bailey disclosed (re. Claim 1) *initiating, by an active device on behalf of a group of devices,*(Bailey- Figures 12a-12e, Column 9 Lines 40-55, *client requests a subnet broadcast and establish itself as either a master client or passive client) a downloading session to a group address associated with the group of devices, (Bailey-subnet broadcast to devices within the subnet) wherein the group of devices includes the active*

device and a plurality of passive devices (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15, Figures 12a-12e, Column 9 Lines 40-55, client devices that join a broadcast transfer group wherein said client devices are designated as master clients and passive clients)

The combination of Bailey-Riedle disclosed (re. Claim 1) wherein the second set of the plurality of passive devices are tracked and the one or more of the second set of the plurality of passive devices are proactively selected and promoted to becoming the one or more smart devices (Bailey Column 10 Lines 45-55, a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets)

wherein the second set of the plurality of passive devices to track packet gap information relating to one or more of the packet gaps, the packet gap information including sizes of the packet gaps or frequencies of the packet gaps (Riedle- Column 11 Lines 10-20 wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array, Riedle Column 4 Lines 5-15, the reconstruction of missing packets is performed only when the total size of the lost packets is less than a pre-selected maximum threshold)

and wherein the one or more of the second set of the plurality of passive devices are promoted to being the one or more smart devices or become one or more active

devices (Bailey - Column 10 Lines 45-55, a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets) based on the track packet gap information. (Riedle- Column 11 Lines 10-20 wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array, Riedle Column 4 Lines 5-15,the reconstruction of missing packets is performed only when the total size of the lost packets is less than a pre-selected maximum threshold)

The Applicant presents the following argument(s) [*in italics*]:

...Bailey does not teach or reasonably suggest "initiating, by an active device on behalf of a group of devices..., wherein initiating includes downloading a file to be transmitted as a plurality of packets of data by the active device and a first set of the plurality of passive devices... [and] checking, by a second set of the plurality of passive devices, for packet gaps once the download of the file is completed..., wherein checking includes tracking a continuity of two or more package gaps" as recited by claim 1.

The Examiner respectfully disagrees with the Applicant.

Bailey Figures 12a-12e, Column 9 Lines 40-55 disclosed a multicast broadcast transfer group wherein said client devices are designated as master clients and passive clients. Bailey disclosed initiating a process of *downloading a file to a first set of the plurality of passive devices*. Bailey disclosed (re. Claim 1) promoting one or more of the

plurality of passive devices to being one or smart devices if the packet gap is detected for the one or more passive devices. (Bailey Column 10 Lines 45-55, *a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets*)

The Bailey promotion process thus disclosed *checking, by a second set of the plurality of passive devices, for packet gaps* .

The Examiner notes what while Bailey has overlapping disclosure regarding *checking for packet gaps once the download of the file is completed* Bailey is not relied upon to disclose *wherein checking includes tracking a continuity of two or more package gaps*.

Riedle Column 11 Lines 10-20 disclosed wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.

Riedle disclosed *wherein checking includes tracking a continuity of two or more package gaps*.

The Applicant presents the following argument(s) [*in italics*]:

... Like Bailey, Riedle does not teach or reasonably suggest checking packet gaps or tracking continuity of package gaps as recited by claim 1.

The Examiner respectfully disagrees with the Applicant.

Riedle Column 4 Lines 50-55 disclosed a file being transferred on a multicast network to a receiving client where the tracking system is dynamically scalable to

accommodate extremely large files. The said tracking features could be dynamically completed while the transmission was in progress without requiring knowledge of the actual size of the file before transfer begins.

Riedle Column 11 Lines 10-20 disclosed wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.

Thus Riedle disclosed (re. Claim 1) *checking packet gaps or tracking continuity of package gaps* (Riedle- Column 11 Lines 10-20 wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.)

The Applicant presents the following argument(s) [*in italics*]:

...Bailey and Riedle, neither individually nor when combined, teach or reasonably suggest "promoting one or more of the second set of the plurality of passive devices to being one or more smart devices if the packet gap is detected..."

The Examiner respectfully disagrees with the Applicant.

Bailey disclosed (re. Claim 1) promoting one or more of the plurality of passive devices to being one or smart devices if the packet gap is detected for the one or more passive devices.(Bailey Column 10 Lines 45-55, *a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets*)

Priority

This application claims benefits of priority from PCT Application PCT/CN2005/000264 filed March 7, 2005.

The effective date of the claims described in this application is March 7, 2005.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 27-29 recite a limitation '*wherein the TFTP comprises a multicast file transfer protocol to multitask the plurality of packets to the group of devices.*'

Upon inspection of the Applicant Specification the Examiner cannot detect sufficient guidance regarding any multi-tasking involving a multicast file transfer protocol.

The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 recites a claim dependency on cancelled Claim 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2,4-5,19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (US Patent 6185623) further in view of Riedle (US Patent 6983334).

Bailey Figures 12a-12e, Column 9 Lines 40-55 disclosed client devices that join a broadcast transfer group wherein said client devices are designated as master clients and passive clients. Bailey Column 10 Lines 45-55, Column Lines 11 Lines 25-35

disclosed wherein a passive client becomes a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets.

Bailey disclosed (re. Claim 1) a method comprising initiating a downloading session, wherein initiating includes downloading a file to be transmitted as a plurality of packets of data by an active device and a plurality of passive devices; (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15, Figures 12a-12e, Column 9 Lines 40-55, *client devices that join a broadcast transfer group wherein said client devices are designated as master clients and passive clients*)

Bailey disclosed (re. Claim 1) promoting one or more of the plurality of passive devices to being one or smart devices if the packet gap is detected for the one or more passive devices.(Bailey Column 10 Lines 45-55, *a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets*)

Bailey disclosed (re. Claim 1) *initiating, by an active device on behalf of a group of devices,*(Bailey- Figures 12a-12e, Column 9 Lines 40-55, *client requests a subnet broadcast and establish itself as either a master client or passive client*) *a downloading session to a group address associated with the group of devices,* (Bailey-subnet broadcast to devices within the subnet) *wherein the group of devices includes the active*

device and a plurality of passive devices (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15, Figures 12a-12e, Column 9 Lines 40-55, client devices that join a broadcast transfer group wherein said client devices are designated as master clients and passive clients)

While Bailey substantially disclosed the claimed invention Bailey did not disclose (re. Claim 1) *wherein when the active device has completed download of the packets of data, each of the plurality of passive devices check for a packet gap.*

While Bailey substantially disclosed the claimed invention Bailey did not disclose (re. Claim 1) *wherein checking includes tracking a continuity of two or more package gaps.*

While Bailey substantially disclosed the claimed invention Bailey did not disclose (re. Claim 1) *'requesting the packets not received by the second device if the file size is known and the total size of the lost packets is less than a pre-selected amount' .*

Bailey did not disclose (re. Claim 1) when the active device has completed download of the packets of data, each of the plurality of passive devices check for a packet gap, wherein the packet gap occurs if the file size is known and a number of packets of the plurality of packets are lost, wherein a and total size of the number of lost packets is less than a pre-selected amount.

Riedle Column 4 Lines 50-55 disclosed a file being transferred on a multicast network to a receiving client where the tracking system is dynamically scalable to

accommodate extremely large files. The said tracking features could be dynamically completed while the transmission was in progress without requiring knowledge of the actual size of the file before transfer begins.

Riedle Column 11 Lines 10-20 disclosed wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.

Thus Riedle disclosed (re. Claim 1) *wherein when the active device has completed download of the packets of data, each of the plurality of passive devices check for a packet gap. (Riedle- Column 4 Lines 50-55 without requiring knowledge of the actual size of the file before transfer begins) and a last packet has not been successfully received' . (Riedle- Column 11 Lines 10-20 wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.)*

Riedle Column 4 Lines 5-15 disclosed wherein the reconstruction of missing packets is performed only when the *total size of the lost packets is less than a pre-selected maximum threshold*. If the number of lost packets exceeds this maximum, then all data is thrown away and the transfer is restarted from the beginning without performing the reconstruction of missing packets.

Riedle disclosed (re. Claim 1) *'requesting the packets not received by the second device if the file size is known and the total size of the lost packets is less than a pre-selected amount' .(Riedle Column 4 Lines 5-15, the reconstruction of missing packets is performed only when the total size of the lost packets is less than a pre-selected maximum threshold)*

Riedle disclosed (re. Claim 1) *wherein checking includes tracking a continuity of two or more package gaps.* (Riedle- Column 11 Lines 10-20 *wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array.*)

Bailey and Riedle are analogous art because they present concepts and practices regarding data transfer using TFTP. At the time of the invention it would have been similarly obvious to combine Riedle into Bailey. The motivation for said combination would have been to enable efficiently tracking lost packets of a file being transferred on a multicast network to a receiving client where the tracking system is dynamically scalable to accommodate extremely large files. (Riedle-Column 4 Lines 45-55)

Furthermore Riedle Column 1 Lines 40-55 disclosed unicasting and multicasting protocols for implementing file transfer. Furthermore Riedle Column 2 Lines 45-55, Column 3 Lines 15-25 disclosed wherein only one client may initiate the recovery transfer phase. Riedle Column 4 Lines 10-25 disclosed wherein each individual client device require different packet ranges for recovery.

At the time of the invention it would have been obvious to implement the recovery transfer phases using the unicast (*'non-multicast'*) protocols because as suggested by Riedle the different client devices require different packet ranges for recovery and multicast protocols only make sense when the information being transmitted to each multicast recipient is the same.

The combination of Bailey-Riedle disclosed (re. Claim 1) *wherein the second set of the plurality of passive devices are tracked and the one or more of the second set of the plurality of passive devices are proactively selected and promoted to becoming the one or more smart devices* (Bailey Column 10 Lines 45-55, *a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets*)

wherein the second set of the plurality of passive devices to track packet gap information relating to one or more of the packet gaps, the packet gap information including sizes of the packet gaps or frequencies of the packet gaps (Riedle- Column 11 Lines 10-20 *wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array, Riedle Column 4 Lines 5-15, the reconstruction of missing packets is performed only when the total size of the lost packets is less than a pre-selected maximum threshold*)

and wherein the one or more of the second set of the plurality of passive devices are promoted to being the one or more smart devices or become one or more active devices (Bailey - Column 10 Lines 45-55, *a passive client becomes the a master client upon indicating that said passive client is still missing some packets from the broadcast. The master client is equivalent to the claimed smart device because said master client/smart device is able to monitor missing packets and request transmission for missing packets*) *based on the track packet gap information.* (Riedle- Column 11 Lines

10-20 wherein the client re-requests transfer of the specific packets missing as indicated by the holes in the array, Riedle Column 4 Lines 5-15, the reconstruction of missing packets is performed only when the *total size of the lost packets is less than a pre-selected maximum threshold*)

Claim 19 (re. apparatus) is rejected on the same basis as Claim 1.

Claim 23 (re. a system) is rejected on the same basis as Claim 1.

The motivation to combine described in Claim 1 applies to Claims 19,23.

Bailey-Riedle disclosed (re. Claim 2,20,24) wherein the multicasting of the plurality of packets comprises multicasting to the multiple clients using a multicast Trivial File Transfer Protocol (TFTP). (Bailey-Column 3 Lines 25-45, Column 4 Lines 5-15)

The motivation to combine described in Claim 1 applies to Claims 2,20,24.

Bailey-Riedle disclosed (re. Claim 4,21,25) wherein the download of the file occurs during a pre-boot phase of the first client device. (Bailey-Fig. 13a-Fig. 13d, Column 11 Lines 45-55)

The motivation to combine described in Claim 1 applies to Claims 4,21,25.

Bailey-Riedle disclosed (re. Claim 5,22,26) wherein the file comprises a boot image for the first client device. (Bailey-Fig. 13a-Fig. 13d, Column 11 Lines 45-55)

The motivation to combine described in Claim 1 applies to Claims 5,22,26.

Bailey-Riedle disclosed (re. Claim 27,28,29) wherein the TFTP comprises a multicast file transfer protocol to multitask the plurality of packets to the group of

devices. (Bailey-Column 1 Lines 35-45, *multicasting the load programs to all network stations*)

The motivation to combine described in Claim 1 applies to Claims 27,28,29.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG C. BENGZON whose telephone number is

(571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Pappas can be reached on (571)272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GREG C BENGZON/
Primary Examiner, Art Unit 2444